

### **In the Specification**

Please amend paragraphs [0039] and [0042] as follows:

$$\text{[0039]} \quad V_{\text{add}} = G (V_a + V_b + V_c + V_d + V_{ga} + V_{gb} + V_{gc} + V_{gd}) \quad (3)$$

Therefore, if  $4G_{\text{vosadd}} = -V_{\text{add}}$ , the total offset voltage of the addition signal can be compensated.

$$V_{\text{osadd}} = -V_{\text{add}} / (4 \cdot G)$$

$$= - [(V_a + V_b + V_c + V_d + V_{ga} + V_{gb} + V_{gc} + V_{gd}) / 4] \quad (4)$$

Accordingly, the correction offset voltage is not affected by the switch of the gain G because the gain G is not in the correction offset voltage of the addition signal  $V_{\text{osadd}}$ . Namely, from equation (4), the correction offset signal, i.e., the correction offset voltage of the addition signal  $V_{\text{osadd}}$ , is independent to gain G of the amplifiers. Then, as shown in FIG. 3, the correction offset signal  $V_{\text{osadd}}$  with a fixed value is previously added to the inputs of the amplifiers 66A, 66B, 66C and 66D.

**[0042]** Next, Fig. 5 is a portion of the circuit diagram in Fig. 2. With Fig. 5, the correction offset voltage  $V_{\text{ossub}}$  in the subtraction signal  $(A+B)-(C+D)$  is described in detail as follows. The total offset voltage of the subtraction signal  $V_{\text{sub}}$  is represented by the foregoing equation (5). Therefore, if  $4G_{\text{vossub}} = -V_{\text{sub}}$ , the total offset voltage of the subtraction signal  $V_{\text{sub}}$  can be compensated.

$$V_{\text{osub}} = -V_{\text{sub}} / (4 \cdot G)$$

$$= - \{ [(V_a + V_b + V_{ga} + V_{gb}) - (V_c + V_d + V_{gc} + V_{gd})] / 4 \} \quad (6)$$

Accordingly, the correction offset voltage is not affected by the switch of the gain G because the gain G is not in the correction offset voltage of the subtraction signal  $V_{\text{osub}}$ . Namely, from equation (4), the correction offset signal, i.e., the correction offset voltage of the subtraction signal  $V_{\text{osub}}$ , is also independent to gain G of the amplifiers. Then, as shown in FIG. 5, the correction offset signal  $V_{\text{osub}}$  with a fixed value is previously added to the inputs of the amplifiers 66A, 66B, 66C and 66D